Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A method for determining a geographic location of a user equipment via a location service server in a wireless network, comprising the steps of:

(a) determining a value of the transmission timing delay of the user equipment;

(b) measuring a round trip time of a radio signal between a connected transceiver node and the user equipment, wherein the connected transceiver node is in active communication with the user equipment;

q1 (c) measuring a round trip time of a radio signal between at least one other transceiver node and the user equipment, wherein the at least one other transceiver node is not connected to the user equipment;

(d) calculating a distance between the user equipment and the connected transceiver node and between the user equipment and each of the at least one other transceiver node using the transmission timing delay determined in said step (a); and

(e) determining the location of the user equipment using the distances calculated in said step (d).

PAGE 3/12 * RCVD AT 5/18/2004 1:14:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729306 * CSID: * DURATION (mm-ss):03-50

2. (original) The method of claim 1, wherein said step (a) comprises determining the transmission timing delay by using the connected transceiver node to query the user equipment.

3. (original) The method of claim 1, wherein said step (a) comprises determining the transmission timing delay by setting the transmission timing delay to equal a default value T_0.

4. (original) The method of claim 1, further comprising the step of requesting a connection between the user equipment and a selected transceiver node before said step (a) if the user equipment is not connected to any transceiver node, and connecting the selected transceiver node with the user equipment so that the selected transceiver node comprises the connected transceiver node.

5. (original) The method of claim 4, wherein said step of requesting a connection further comprises requesting, by the selected transceiver node, a return trip time measurement via a random access channel to connect the user equipment to the selected transceiver node.

6. (original) The method of claim 1, wherein said step (c) comprises comparing a time-of-arrival of an uplink transmission from said UE at the non-connected transceiver nodes to the time-of-arrival of the uplink transmission at the connected transceiver

PAGE 4/12 * RCVD AT 5/18/2004 1:14:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729306 * CSID: * DURATION (mm-ss):03-50

node, and determining the propagation time of each of the non-connected transceiver nodes therefrom.

7. (original) The method of claim 1, wherein said step (c) further comprises determining a round trip time for at least two other transceiver nodes which are not connected to the user equipment.

8. (original) The method of claim 7, wherein said step (e) comprises determining the user equipment location by mathematically generating a circle around the connected transceiver node and each of the at least two other transceiver nodes, wherein the radius of each circle is the distance of the user equipment to the respective transceiver node determined in said steps (c) and (d), and determining an intersection of the circles.

9. (original) The method of claim 8, wherein said step of determining the intersection of the circles comprises iteratively increasing or iteratively decreasing the radii of each of the circles until an intersection point is determined.

10. (original) The method of claim 1, wherein said step (e) comprises determining the user equipment location by mathematically generating a circle around the connected transceiver node and each of the at least one other transceiver node, wherein the radius of each circle is the distance of the user equipment to the respective transceiver node determined in said step (c) and (d), and determining an angle of arrival of radio signals used for said steps (c) and (d) at the connected transceiver node and the at least one other transceiver node.

PAGE 5/12 * RCVD AT 5/18/2004 1:14:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729306 * CSID: * DURATION (mm-ss):03-50

11. (original) The method of claim 1, wherein said step (b) further comprises determining a sector of the area of coverage of the connected transceiver node in which the user equipment is located.

12. (original) The method of claim 11, wherein said step (c) further comprises searching, by the at least one other transceiver node, within the sector determined in said step (b).

13. (currently amended) The method of claim 1, wherein said steps (a) - [[(f)]] (e) are performed in response to receiving a request for the location of a user equipment.

14. (original) A wireless communication system comprising a core network, a plurality of radio network controllers, a plurality of wireless transceiver nodes for communicating with a user equipment located in a geographical area supported by said transceiver nodes, and a location services server for determining a location of the user equipment, said location services server comprising:

means for determining a round trip time for a radio signal from between a user equipment and a connected transceiver node in communication with the user equipment including means for measuring a time from a beginning of transmission of a downlink transmission signal from the connected transceiver node to the reception of an uplink transmission signal from the user equipment to the connected transceiver node in response to the downlink transmission signal;

PAGE 6/12 * RCVD AT 5/18/2004 1:14:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729306 * CSID: * DURATION (mm-ss):03-50

means for determining a round trip time between the user equipment and at least one other non-connected transceiver node which is not in communication with the user equipment;

means for determining the distance of the user equipment from the connected transceiver node and the at least one other non-connected transceiver node; and

means for determining a location of the user equipment from the distances of the user equipment from each of the nodes.

15. (original) The wireless communication system of claim 14, wherein said means for determining a round trip time between the user equipment and the at least one other non-connected transceiver node comprises means for receiving an uplink transmission signal from the user equipment at the at least one other non-connected transceiver node which is not in active communication with the user equipment and means for comparing the reception times at the at least one other non-connected transceiver node with the reception time at the connected transceiver node.

16. (original) The wireless communication system of claim 15, further comprising means for determining an angle of arrival of transmission signals at the connected transceiver node in active communication and the at least one other transceiver node.

17. (original) The wireless communication system of claim 15, further comprising means for determining a round trip time between the user equipment and a plurality

PAGE 7/12 * RCVD AT 5/18/2004 1:14:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729306 * CSID: * DURATION (mm-ss):03-50

of other non-connected transceiver nodes which are not in active communication with the user equipment.

18. (original) The wireless communication system of claim 17, further comprising means for determining a distance of the user equipment from the connected transceiver node and from each of the plural non-connected transceiver nodes using a nominal value of a transmission timing delay of the user equipment for determining the distances of the user equipment from the transceiver nodes and mathematically generating a circle around each of the transceiver nodes, wherein a radius of each circle is the distance of the user equipment to the respective transceiver node, and wherein said means for determining a location comprises means for determining an intersection point of the circles.

19. (original) The wireless communication system of claim 18, further comprising means for determining whether the radii determined are one of too large and too small.

20. (original) The wireless communication system of claim 19, wherein said means for determining a location comprises means for iteratively decreasing the radii until an intersection point of the circles is found when the radii are too large and means for iteratively increasing the radii until an intersection point of the circles is found when the radii are too small.

PAGE 8/12 * RCVD AT 5/18/2004 1:14:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729308 * CSID: * DURATION (mm-ss):03-50